DOCUMENT RESUME

ED 277 072 CS 505 456

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TITLE	Television: What Do National Assessment Results Tell Us?
INSTITUTION	National Assessment of Educational Progress, Princeton, NJ.
SPONS AGENCY	Center for Statistics (OERI/ED), Washington, DC.
REPORT NO	NAEP-15-R-02
PUB DATE	Dec 86
GRANT	NIE-G-83-0011
NOTE	20p.
AVAILABLE FROM	National Assessment of Educational Progress, Educational Testing Service, Rosedale Rd., Princeton, NJ 08541.
PUB TYPE	Reports - Research/Technical (143)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Elementary Secondary Education; Reading Ability; *Reading Achievement; Reading Habits; *Reading Research; *Television Research; *Television Viewing
IDENTIFIERS	National Assessment of Educational Progress

ABSTRACT

A study examined the relationship between television viewing habits and reading achievement of students in grades 4, 8, and 11. Students, in addition to responding to the achievement and background exercises, answered three questions about their television viewing habits. Analysis of results showed that at all three grade levels, students who watched television six hours or more were much poorer readers than those who watched less. At grade 11, students who watched television two hours or less each day were better readers than those who watched three to five hours. This pattern follows at grades 4 and 8, although the differences were not as great. Results also indicated that the negative relationship between excessive television watching and reading performance is worst for white students and for students with well-educated parents. These results suggest that parents should modify their own television viewing behavior, monitor their children's television viewing, teach children to make intelligent choices, watch with their children, and advocate more responsible television programming. Educators should teach parents about the negative effects of television viewing, teach children how to evaluate what they see, incorporate excellent programs into instruction, and develop and suggest more positive after-school activities. (SRT)

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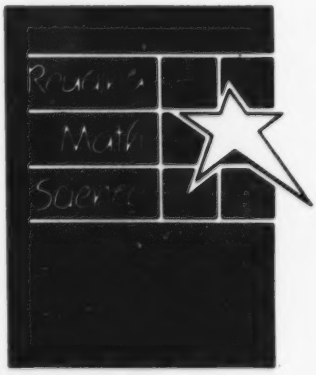
Television



National Assessment of Educational Progress

ETS

The Nation's Report Card

CS505456

Television:

What Do National Assessment Results Tell Us?

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December 1986

Report No. 15-R-02

The National Assessment of Educational Progress, The Nation's Report Card, is funded by the Office for Educational Research and Improvement--Center for Statistics, under a grant to Educational Testing Service. National Assessment is an education research project mandated by Congress to collect data over time on the performance of young Americans in various learning areas. It makes information on assessment procedures available to state and local education agencies.

This report, No. 15-R-02, can be ordered from the National Assessment of Educational Progress at Educational Testing Service, Rosedale Road, Princeton, New Jersey 08541-0001.

The work upon which this publication is based was performed pursuant to Grant No. NIE-G-83-0011 of the Office for Educational Research and Improvement. It does not, however, necessarily reflect the views of that agency.

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HIGHLIGHTS

Findings

- American students watch a great deal of television.
- Reading achievement is lowest for students who watch six hours or more per day.
- The negative relationship between excessive television watching and performance is worst for White students and for students with well-educated parents.

Recommendations

Parents:

- Modify their own television viewing behavior.
- Monitor their children's television viewing.
- Teach children to make intelligent choices.
- Watch with their children to help them separate fact from fantasy, sales pitch from programming.
- Advocate more responsible television programming.

Educators:

- Educate parents about negative effects.
- Teach children how to evaluate what they see on television.
- Incorporate excellent programs into instruction.
- Develop and suggest more positive after-school activities.

INTRODUCTION

Almost 50 years ago, when television was being introduced into American homes, E. B. White prophesied that:

> . . . television is going to be the test of the modern world, and . . . in this new opportunity to see beyond the range of our vision we shall discover either a new and unbearable disturbance of the general peace, or a saving radiance in the sky. (Boyer, 1983, p. 198)

Today, even with television so commonplace in American life, the virtues and vices of the medium are still hotly debated.

Advocates insist that television has made the earth a global village, bringing individuals into immediate contact with cultures and events that they might otherwise never have experienced. They argue that television serves as a stimulant to youngsters, introducing them to ideas and issues that they may then pursue in books and class in greater detail. Detractors worry about the harmful effects of television on intellectual development. They argue that contemporary programming is catering to, if not breeding, violence. Critics also maintain that television encourages students to approach learning as entertainment requiring little effort or concentration, and tends to blur the distinctions between fact and fantasy. Such critics fear we are producing a nation of "vidiots" -- individuals who are infected with consumerism and "hooked" on television, the "plug-in drug" (Winn, 1977).

The jury is still out in regard to the ultimate effect of television on the fabric of American society, but since the 1950s a significant amount of research has been conducted concerning the relationship between television viewing and academic achievement. A synthesis of 23 research studies on the impact of television viewing on school learning indicated that there is a

slight negative relationship between television viewing and achievement (Williams, Haertel, Haertel, & Walberg, 1982). This synthesis concluded that watching up to 10 hours per week may actually enhance achievement slightly, but beyond 10 hours, achievement diminishes as viewing increases up to 35 or 40 hours per week. Beyond that heavy level, additional viewing apparently has little further impact.

For better or worse television has become a permanent fixture in American life. By 1979, some 98 percent of households nad at least one television set (U.S. Bureau of the Census, 1982).

The National Assessment of Educational Progress (NAEP) provides an important new source of national data on students' television viewing. NAEP is an ongoing national survey of the knowledge, skills, understandings, and attitudes of young Americans in major learning areas usually taught in school. Its primary goals are to detect and report the current status of, as well as changes in, the educational attainments of young Americans, and to report long-term trends in those attainments. Results are used by educators, legislators, and others for improving the educational experience of youth in the United States. NAEP is the first national effort to obtain comprehensive and dependable achievement data on a regular basis in a uniform, scientific manner. Funded by the Office for Educational Research and Improvement (OERI), NAEP is administered by Educational Testing Service (ETS) as an activity of its Center for the Assessment of Educational Progress (CAEP).

The focus of the 1983-84 National Assessment was reading and writing. NAEP administered the equivalent of eight assessment booklets, each containing approximately 45 minutes of achievement and background exercises, to separate samples of students at three grade levels: fourth, eighth, and eleventh.

These samples were extended to allow reporting for three age groups as well: 9-, 13-, and 17-year-olds. About 1,600 public and nonpublic schools and about 100,000 students in 30 states across four regions were included in the sample.

This background paper describes one segment of the assessment results: the relationship between television viewing habits and reading achievement of students in grades 4, 8, and 11. Percentages in this report are weighted in accordance with the sample design. Reading achievement is measured by an underlying reading proficiency variable derived through the use of Item Response Theory. Results are reported using a reading proficiency scale that ranges from 0 to 500. Other results, change analyses, and writing achievement are reported elsewhere.

RESULTS FROM THE 1983-84 NATIONAL ASSESSMENT

The 1983-84 National Assessment asked students in grades 4, 8, and 11 three questions about their television viewing habits:

- "How much television do you usually watch each day?"

  This question had seven possible response categories that ranged from "none" up to "six or more hours" daily. Responses were collapsed into three categories: two hours or less, three to five hours, and six hours or more.

- "When you have free time, how often do you watch television?"

  Possible responses were daily, weekly, or yearly.

- "How often do you watch the news on television?"

  Response categories for this question were daily, weekly, monthly, yearly, never.

It should be noted that 11 percent of the students in grade 4, 17 percent in grade 8, and 3 percent in grade 11 did not complete the question on the amount of television usually watched each day.

How Much Time Did Students Report They Spent Watching Television?

Students reported spending a lot of time watching television. Generally speaking, as they get older they watch less. Table 1 presents the 1983-84 assessment data on the amount of time students reported they spend watching television.

Nearly one-third of the fourth-graders reported watching at least six hours of television each day. The proportion drops to 14 percent at the eighth grade and six percent at the eleventh grade.

Fifty percent of the students in grade 8 reported usually watching 3-5 hours of television each day. By the eleventh grade, more than half of the students watched two hours or less of television per day.

TABLE 1. Percentage of Students in Grades 4, 8, and 11 Watching Various Amounts of Television Each Day

Grade	0-2 Hours	3-5 Hours	6 Hours or More
4	32	38	30
8	36	50	14
11	57	37	6

Race/ethnicity. Patterns of television viewing varied for students of different racial/ethnic groups. Black students in all grades watched the most television and White students the least (Table 2). The percentage of Black students who watched six hours or more of television each day is two to three times larger than the percentage of White students in this category.

At the fourth-grade level, more than 50 percent of Black students watched six hours or more of television. By eighth grade this had dropped to 31 percent and by eleventh grade only 13 percent reported watching six hours or more each day. The percentage of Hispanic students watching this heavy amount fell in between the percentages of White and Black students doing so.

At all three grade levels, more White students than Hispanic students reported watching two hours of television or less. Fewer Black students than Hispanic or White students reported watching two hours or less.

TABLE 2. Percentage of White, Black, and Hispanic Students Watching Various Amounts of Television *

Race/ethnicity	0-2 Hours	3-5 Hours	6 Hours or More
GRADE 4			
White	35	40	25
Black	21	28	51
Hispanic	31	36	33
GRADE 8			
White	40	50	10
Black	21	48	31
Hispanic	34	51	16
GRADE 11			
White	61	35	4
Black	36	50	13
Hispanic	55	38	7

* Percentages may not total 100 percent due to rounding.

Parental Education. NAEP data also show that the education level of parents is associated with the amount of television viewing done by their children (Table 3). At all grade levels, the students who reported watching the most television are those who reported that neither of their parents graduated from high school; children of high school graduates watched less television and children of parents with a post-high school education watched the least amount of television.

TABLE 3. Percentage of Students Watching Various Amounts of Television by Parents' Level of Education *

Parental Education	0-2 Hours	3-5 Hours	6 Hours or More
GRADE 4			
No high school diploma	26	36	38
Graduated high school	25	42	33
Post-high school	38	36	25
GRADE 8			
No high school diploma	28	51	20
Graduated high school	30	56	15
Post-high school	44	46	10
GRADE 11			
No high school diploma	46	43	11
Graduated high school	50	43	7
Post-high school	65	31	4

* Percentages may not total 100 percent due to rounding.

Student Choice. Students were asked how often they watched television when they had free time. The vast majority of students reported that they watched television daily when they had free time (Table 4).

TABLE 4. Percentage of Students in Grades 4, 8, and 11 Watching Television During Free Time

Grade	Daily	Weekly	Yearly
4	90	8	2
8	94	5	1
11	82	17	1

Students were also asked how often they watched the news on television. More than 40 percent of students in all three grades reported watching the news daily on television (Table 5).

TABLE 5. Percentage of Students in Grades 4, 8, and 11 Watching the News on Television *

	Frequency of News Watching				
Grade	Daily	Weekly	Monthly	Yearly	Never
4	41	25	7	4	24
8	45	34	8	3	10
11	49	33	10	3	5

* Percentages may not total 100 percent due to rounding.

How is Television Viewing Related to Reading Performance?

At all three grade levels, students who watched television six hours or more were much poorer readers than those who watched less (Table 6). At grade 11, students who watched television two hours or less each day were better readers than those who watched three to five hours. This pattern follows at grades 4 and 8, although the differences are not as great.

TABLE 6. Reading Proficiency of Students Watching Various Amounts of Television Each Day *

Grade	0-2 Hours	3-5 Hours	6 Hours or More
4	226 (1.3)	222 (0.9)	205 (0.8)
8	270 (0.8)	264 (0.6)	246 (1.1)
11	296 (1.0)	284 (0.8)	269 (1.4)

* Reading proficiency is reported using a scale that ranges from 0 to 500. Standard errors are presented in parentheses. It can be said with 95 percent certainty that the reading proficiency of the population of interest is in the interval of the estimated average $\pm$ 2 standard errors.

NAEP data reveal that the amount of television watching and its relationship to achievement varied for different racial/ethnic and parental education groups.

Race/ethnicity. As Table 2 indicated, Black students reported more television watching than did Hispanic students, who in turn watched more than White pupils. This was true at every grade level. However, the negative relationship between amount of television viewing and reading proficiency was

not as apparent for Black students as it was for White students (Table 7). The relationship between television watching and reading performance for Hispanic students is different across the three grade levels.

TABLE 7. Reading Proficiency of White, Black, and Hispanic Students Watching Various Amounts of Television Each Day *

Race/ethnicity	0-2 Hours	3-5 Hours	6 Hours or More
GRADE 4			
White	232 (1.3)	228 (1.0)	213 (1.1)
Black	200 (2.2)	201 (1.6)	190 (1.4)
Hispanic	208 (2.5)	204 (1.4)	193 (1.7)
GRADE 8			
White	274 (0.9)	268 (0.6)	253 (1.3)
Black	246 (2.0)	248 (1.2)	236 (2.5)
Hispanic	249 (2.2)	249 (1.5)	238 (2.9)
GRADE 11			
White	301 (1.0)	291 (0.8)	275 (2.1)
Black	272 (2.2)	267 (2.0)	262 (2.9)
Hispanic	277 (2.2)	268 (1.8)	254 (6.5)

* Reading proficiency is reported using a scale that ranges from 0 to 500. Standard errors are presented in parentheses. It can be said with 95 percent certainty that the reading proficiency of the population of interest is in the interval of the estimated average $\pm$ 2 standard errors.

For White and Hispanic fourth-graders, as television viewing increased reading achievement decreased. In contrast, the reading achievement of Black fourth-graders was about the same for those who watched up to five hours. Achievement was lower only for those who watched six hours or more. At grade eight, White students who watch more television were poorer readers while the reading achievement of Black and Hispanic students was about the same for up to five hours of television viewing. At grade 11, the amount of television

viewing was inversely related to reading achievement for all three racial/ethnic groups, but the trend was more pronounced for White and Hispanics students than for Black students.

Parental Education. Table 3 showed that students from less educated families watched more television. However, the amount of television viewing of these students was not linked with low reading achievement except for those who watched six or more hours daily (Table 8).

TABLE 8. Reading Proficiency of Students Watching Various Amounts of Television by Parental Education *

Parental Education	0-2 Hours	3-5 Hours	6 Hours or More
GRADE 4			
No high school diploma	201 (3.0)	207 (1.9)	195 (2.8)
Graduated high school	220 (2.0)	220 (1.4)	206 (1.5)
Post-high school	237 (1.2)	231 (1.3)	210 (1.2)
GRADE 8			
No high school diploma	247 (2.0)	252 (1.5)	236 (2.4)
Graduated high school	262 (1.0)	259 (0.8)	246 (1.5)
Post-high school	279 (1.0)	271 (0.8)	255 (1.8)
GRADE 11			
No high school diploma	274 (1.8)	272 (1.7)	260 (3.7)
Graduated high school	287 (1.0)	279 (1.0)	268 (2.2)
Post-high school	305 (1.0)	295 (1.0)	279 (2.4)

* Reading proficiency is reported using a scale that ranges from 0 to 500. Standard errors are presented in parentheses. It can be said with 95 percent certainty that the reading proficiency of the population of interest is in the interval of the estimated average $\pm$ 2 standard errors.

The best readers among fourth- and eighth-grade students whose parents did not graduate from high school were those who watched three to five hours of television a day. At grade 11, the reading achievement of students whose

parents did not graduate from high school was about the same for those watching up to five hours. Achievement was lower only for those who viewed six or more hours a day. For fourth-, eighth-, and eleventh-grade students from families with post-high school education, high reading achievement was associated with low amounts of television watching.

SUGGESTIONS FOR PARENTS AND EDUCATORS

Students reported watching a great deal of television, although the amount was lower among older students. Reading achievement was lowest for students who watched six hours or more of television daily. The negative relationship between the amount of television viewing and reading proficiency was most apparent among the older students. The negative relationship was also most extreme for White youngsters and for students from well educated families.

What can parents do? A recent issue of the Harvard Education Letter (1985) offered suggestions for parents who wish to influence their children's television-watching behavior: 1) modify their own television watching if they are heavy users; 2) monitor their children's television watching; 3) teach children to make intelligent television viewing choices; 4) watch with their children to assist them in separating fact from fantasy and sales pitch from programming; and 5) advocate more responsible television programming.

What can educators do? Clearly the school can have only a limited effect on television viewing. Nonetheless, educators have some options (Harvard Education Letter, 1985). First, they can educate parents about the possible effects of television and steps that families might take to make better use of television viewing time. Second, schools can develop curricula that teach children how to evaluate what they see on television and instruct them to become effective and discriminating consumers of the medium. In this effort teachers would not only teach students about television, they would be encouraged to incorporate some of the excellent television programming into

their own instructional materials. Television may be used to broaden the opportunities for poor readers and to bring difficult material to more diverse groups of students.

Finally, schools can develop more after-school activities to engage students and displace "free time" otherwise devoted to television viewing.

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